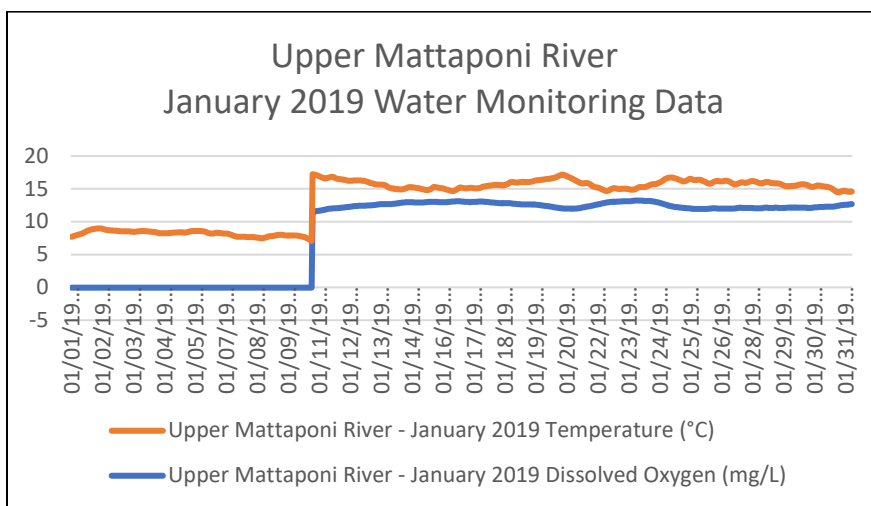


Mattaponi River 2019 Archived Data

Upper Mattaponi

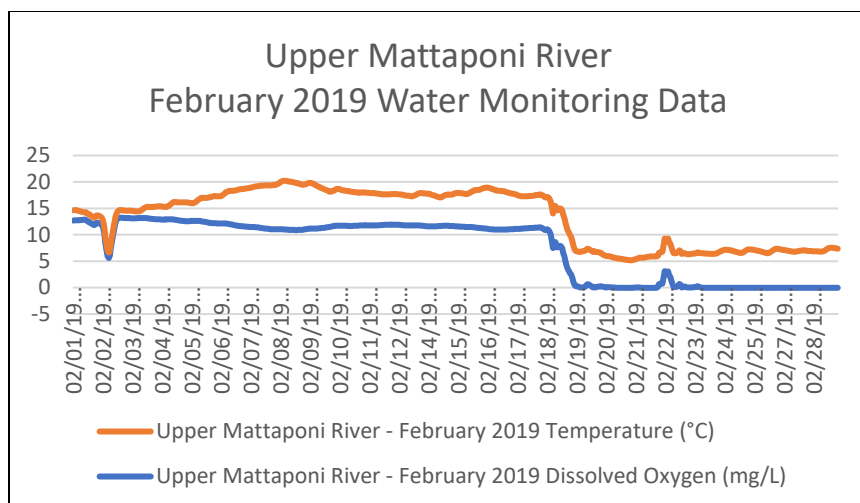
January 2019 monitoring data (732 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.04 mg/L to 13.24 mg/L with an average of 8.62 mg/L. Water temperature ranged from 1.58 °C (38.84 °F) to 9.02 °C (48.24 °F) with an average of 4.78 °C (40.60 °F).

January 2019	Dissolved Oxygen	Temperature
Recorded Samples	732	732
Maximum	13.24 mg/L	9.02 °C
Minimum	-0.04 mg/L	1.58 °C
Average	8.62 mg/L	4.78 °C



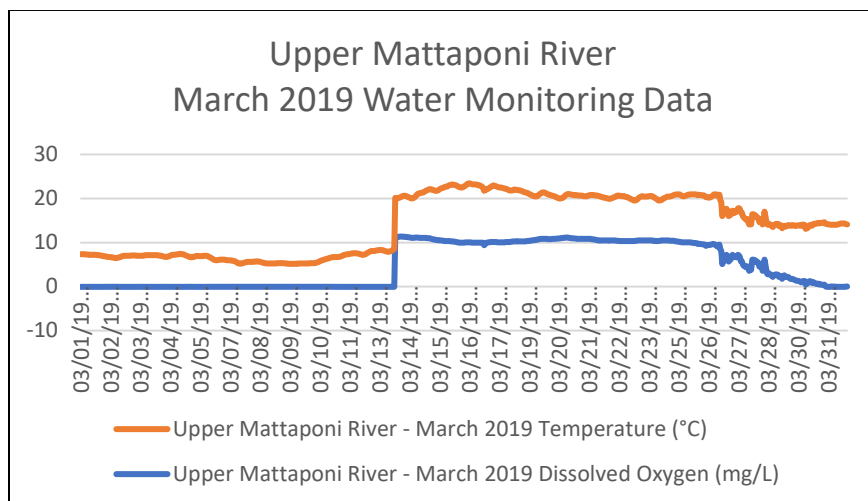
February 2019 monitoring data (672 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.05 mg/L to 13.22 mg/L with an average of 7.54 mg/L. Water temperature ranged from 0.09 °C (32.16 °F) to 9.22 °C (48.60 °F) with an average of 5.89 °C (42.60 °F).

February 2019	Dissolved Oxygen	Temperature
Recorded Samples	672	672
Maximum	13.22 mg/L	9.22 °C
Minimum	-0.05 mg/L	0.09 °C
Average	7.54 mg/L	5.89 °C



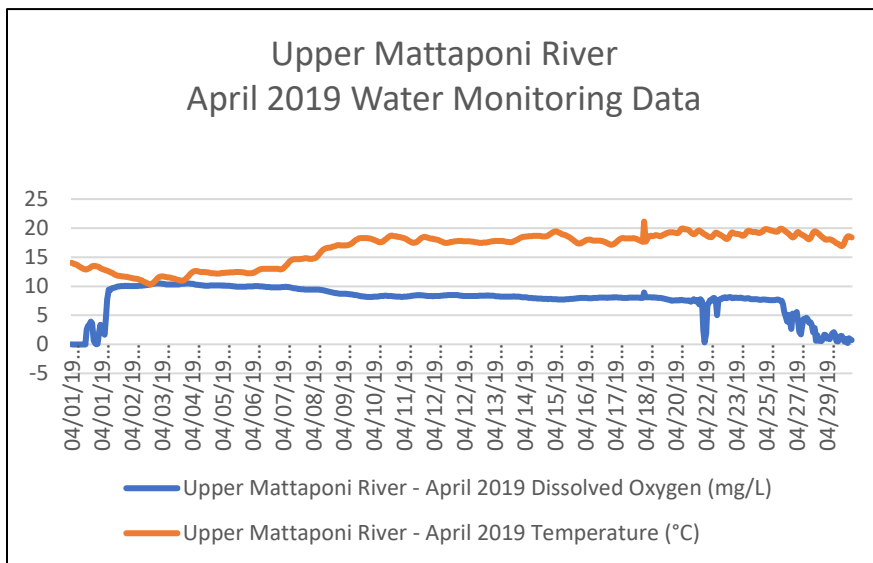
March 2019 monitoring data (305 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.05 mg/L to -0.04 mg/L with an average of -0.04 mg/L. Water temperature ranged from 5.2 °C (41.36 °F) to 8.52 °C (47.34 °F) with an average of 6.62 °C (43.92 °F).

March 2019	Dissolved Oxygen	Temperature
Recorded Samples	305	305
Maximum	-0.04 mg/L	8.52 °C
Minimum	-0.05 mg/L	5.2 °C
Average	-0.04 mg/L	6.62 °C



April 2019 monitoring data (569 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.03 mg/L to 10.49 mg/L with an average of 7.76 mg/L. Water temperature ranged from 10.34 °C (50.61 °F) to 21.14 °C (70.05 °F) with an average of 16.48 °C (61.66 °F).

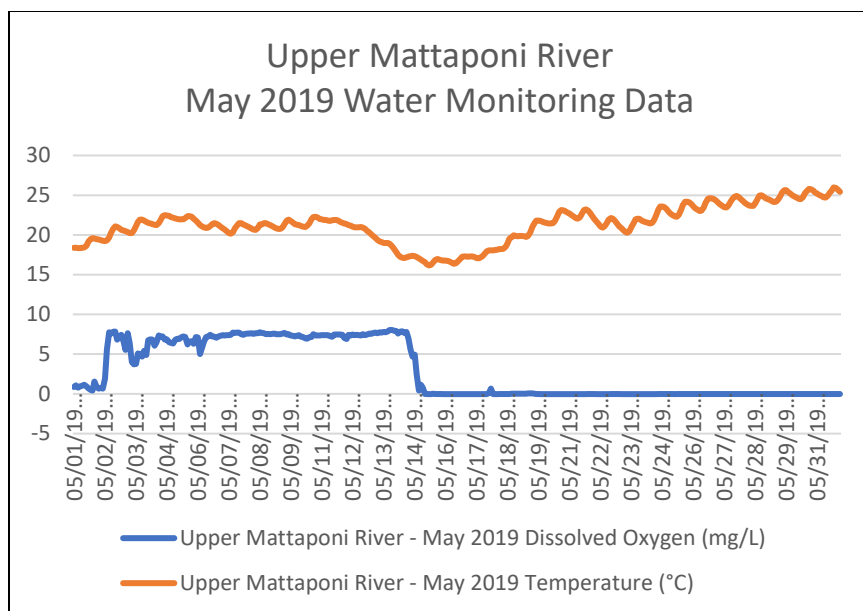
April 2019	Dissolved Oxygen	Temperature
Recorded Samples	569	569
Maximum	10.49 mg/L	21.14 °C
Minimum	-0.03 mg/L	10.34 °C
Average	7.76 mg/L	16.48 °C



May 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.03 mg/L to 8.05 mg/L with an average of 2.90 mg/L. Water temperature ranged from 16.16 °C (61.09 °F) to 25.98 °C (78.76 °F) with an average of 21.31 °C (70.36 °F).

*Note: Monitor for dissolved oxygen was offline May 15 – 31, 2019.

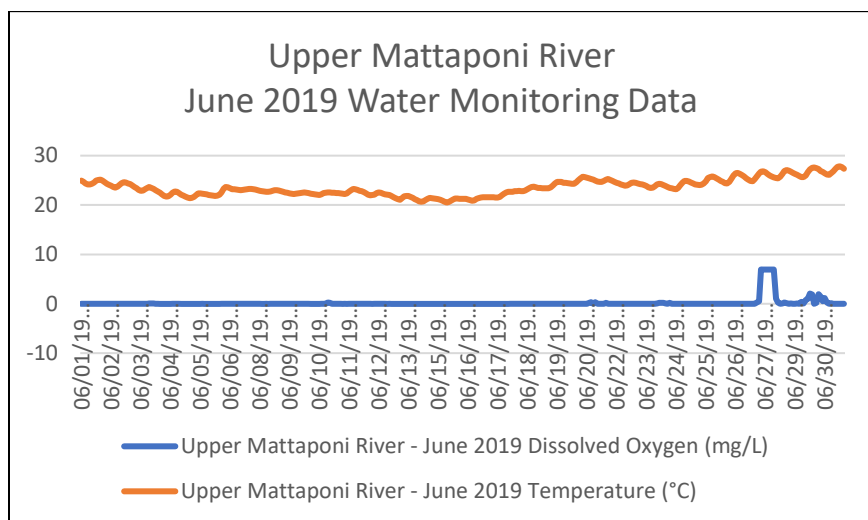
May 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	8.05 mg/L	25.98 °C
Minimum	-0.03 mg/L	16.16 °C
Average	2.90 mg/L	21.31 °C



June 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.03 mg/L to 6.94 mg/L with an average of 0.16 mg/L. Water temperature ranged from 20.5 °C (68.9 °F) to 27.84 °C (82.11 °F) with an average of 23.56 °C (74.41 °F).

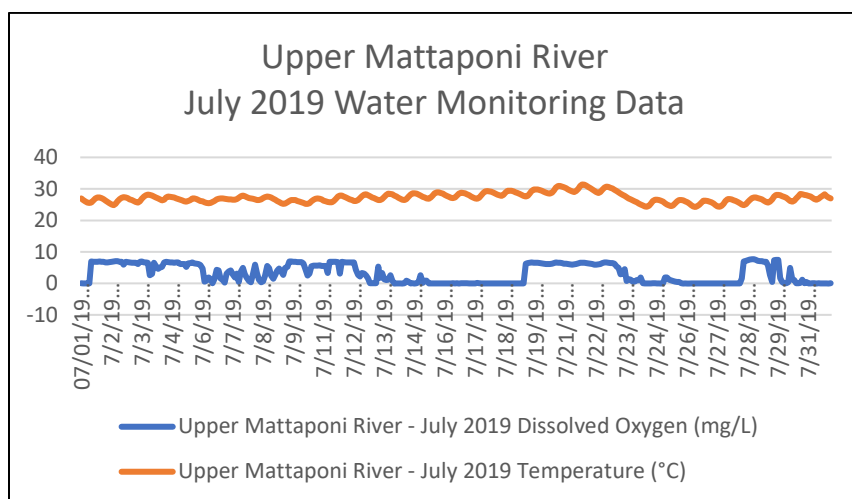
*Note: Monitor for dissolved oxygen was offline or operating intermittently in June 2019.

June 2019	Dissolved Oxygen	Temperature
Recorded Samples	360	360
Maximum	6.94 mg/L	27.84 °C
Minimum	-0.03 mg/L	20.5 °C
Average	0.16 mg/L	23.56 °C



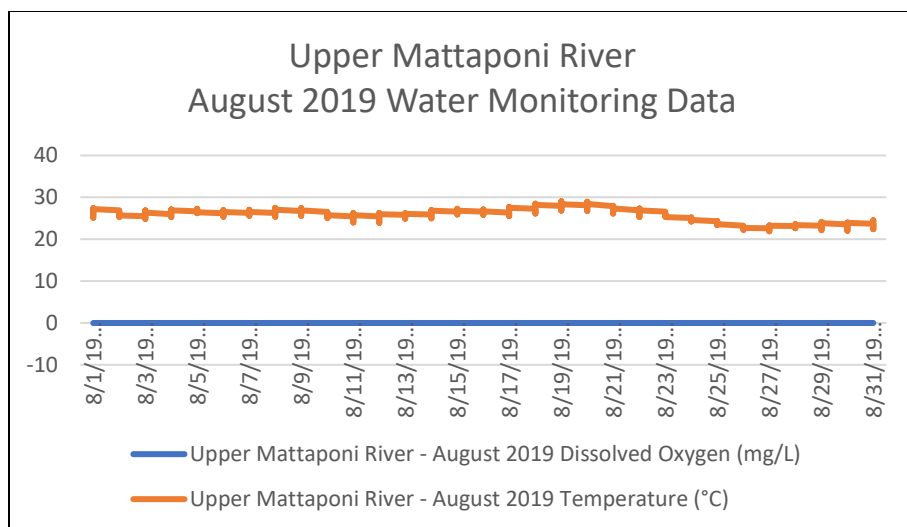
July 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.02 mg/L to 7.67 mg/L with an average of 3.10 mg/L. Water temperature ranged from 24.24 °C (75.63 °F) to 27.19 °C (80.94 °F) with an average of 27.19 °C (80.94 °F).

July 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	7.67 mg/L	31.4 °C
Minimum	-0.02 mg/L	24.24 °C
Average	3.10 mg/L	27.19 °C



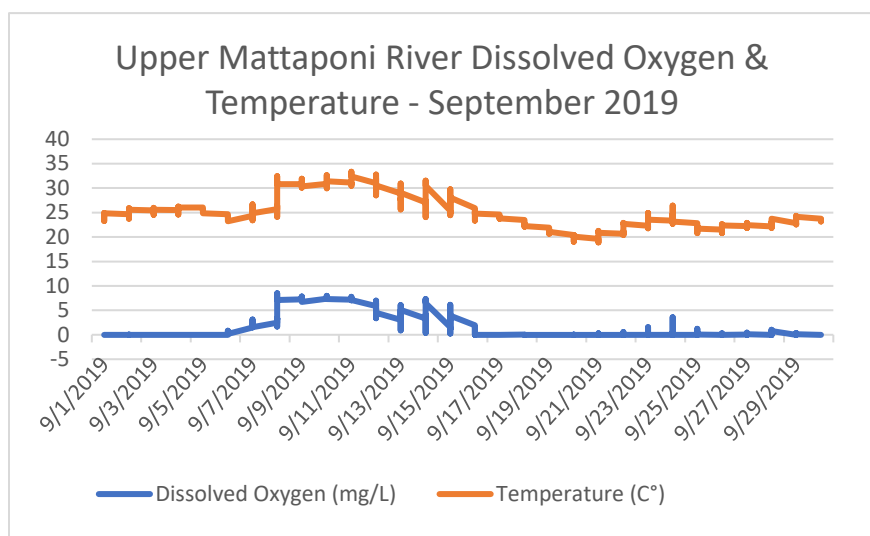
August 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.03 mg/L to 0 mg/L with an average of -0.02 mg/L. Water temperature ranged from 21.88 °C (71.38 °F) to 29.08 °C (84.34 °F) with an average of 25.60 °C (78.08 °F).

August 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	0 mg/L	29.08 °C
Minimum	-0.03 mg/L	21.88 °C
Average	-0.02 mg/L	25.60 °C



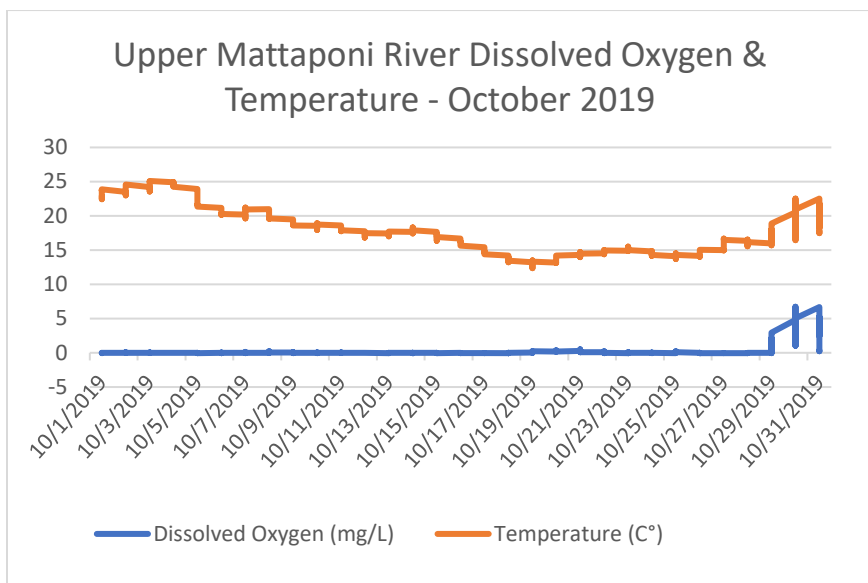
September 2019 monitoring data (361 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.03 mg/L to 8.49 mg/L with an average of 1.58 mg/L. Water temperature ranged from 18.92°C (66.06°F) to 26.94°C (80.49°F) with an average of 23.29°C (73.92°F).

September 2019	Dissolved Oxygen	Temperature
Recorded Samples	361	361
Maximum	8.49 mg/L	26.94 °C
Minimum	-0.03 mg/L	18.92 °C
Average	1.58 mg/L	23.29 °C



October 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.04 mg/L to 6.73 mg/L with an average of 0.25 mg/L. Water temperature ranged from 12.22°C (54°F) to 25.12°C (77.22°F) with an average of 17.49°C (63.48°F).

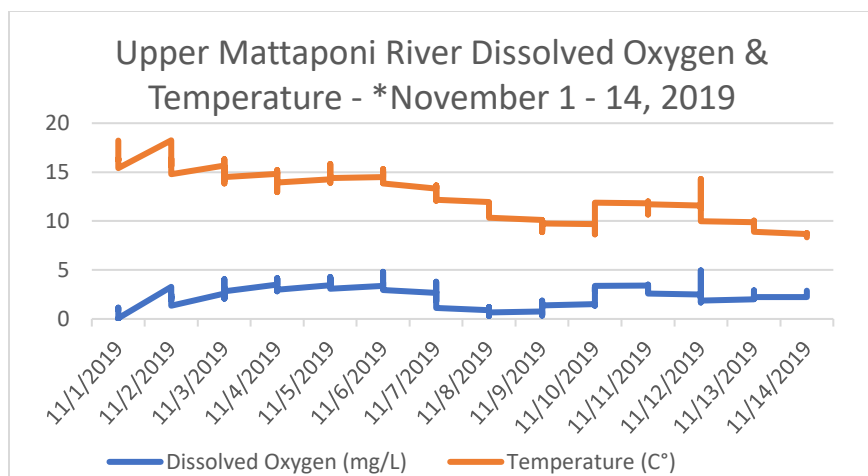
October 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	6.73 mg/L	25.12 °C
Minimum	-0.04 mg/L	12.22 °C
Average	0.25 mg/L	17.49 °C



November 2019 monitoring data (*161 dissolved oxygen and temperature readings (**November 1 – November 14, 2019**)) logged dissolved oxygen levels ranging from 0 mg/L to 4.96 mg/L with an average of 2.42 mg/L. Water temperature ranged from 5.46°C (41.83°F) to 17.32°C (63.18°F) with an average of 10.4°C (50.72°F).

November 2019	Dissolved Oxygen	Temperature
Recorded Samples	*161	*161
Maximum	4.96 mg/L	17.32 °C
Minimum	0 mg/L	5.46 °C
Average	2.42 mg/L	10.4 °C

* U26 Logger did not record complete month's data.



* U26 Logger did not record complete month's data, temp data collected from separate temp logger at same station (Chart reflects data 11/1/2019 – 11/14/2019).

December 2019 monitoring data (*0 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from mg/L to mg/L with an average of mg/L. Water temperature ranged from °C (°F) to °C (°F) with an average of °C (°F).

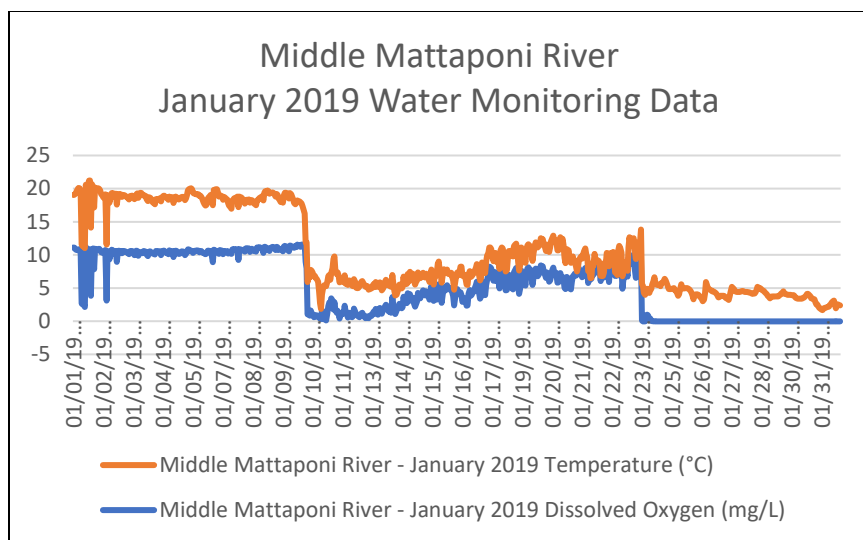
**U26 Logger was not recording data after November 14, 2019

December 2019	Dissolved Oxygen	Temperature
Recorded Samples	0	0
Maximum	*	*
Minimum	*	*
Average	*	*

Middle Mattaponi

January 2019 monitoring data (744 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.02 mg/L to 11.6 mg/L with an average of 5.21 mg/L. Water temperature ranged from 0.06 °C (32.1 °F) to 10.38 °C (50.68 °F) with an average of 5.01 °C (41.02 °F).

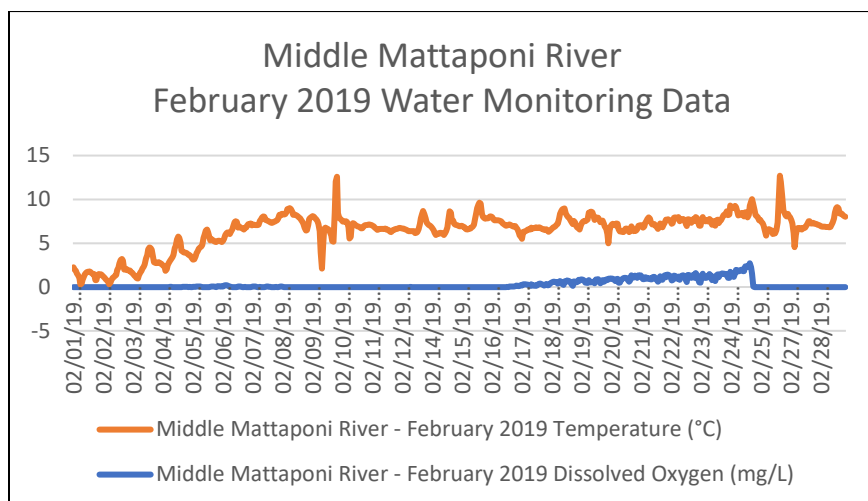
January 2019	Dissolved Oxygen	Temperature
Recorded Samples	744	744
Maximum	11.6 mg/L	10.38 °C
Minimum	-0.02 mg/L	0.06 °C
Average	5.21 mg/L	5.01 °C



February 2019 monitoring data (672 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.02 mg/L to 2.71 mg/L with an average of 0.29 mg/L. Water temperature ranged from 0.3 °C (32.54 °F) to 12.72 °C (54.90 °F) with an average of 6.15 °C (43.07 °F).

*Note: The dissolved oxygen monitor collected data intermittently during February 2019.

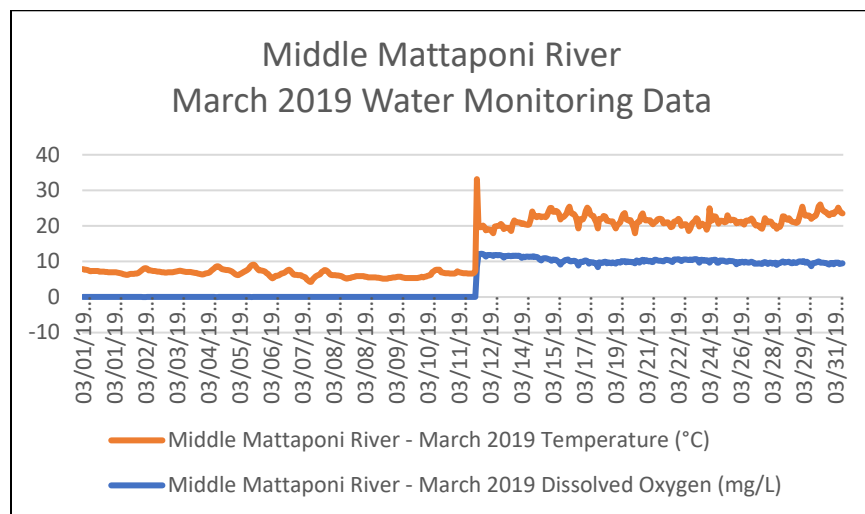
February 2019	Dissolved Oxygen	Temperature
Recorded Samples	672	672
Maximum	2.71 mg/L	12.72 °C
Minimum	-0.02 mg/L	0.3 °C
Average	0.29 mg/L	6.15 °C



March 2019 monitoring data (498 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.01 mg/L to 12.17 mg/L with an average of 5.00 mg/L. Water temperature ranged from 4.26 °C (40.28 °F) to 24.7 °C (76.46 °F) with an average of 8.99 °C (48.18 °F).

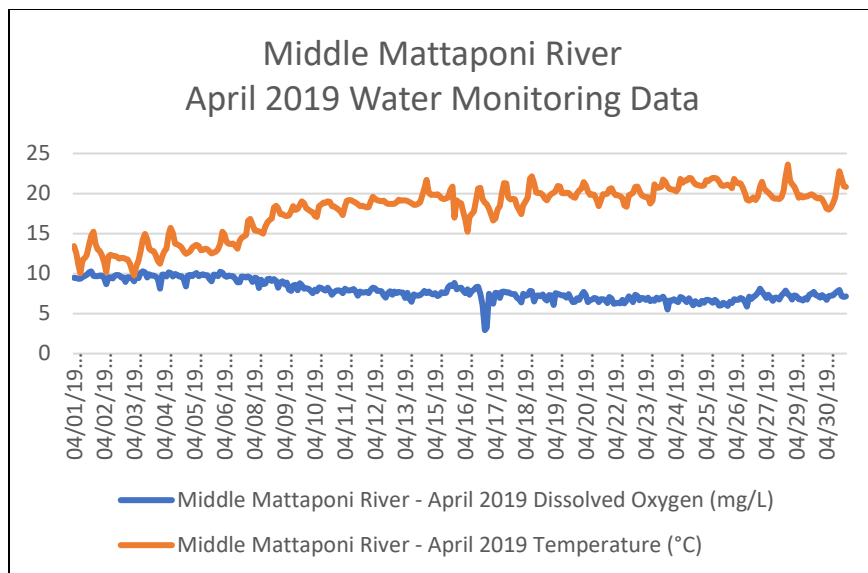
*Note: the dissolved oxygen monitor was offline from March 1 – 11, 2019.

March 2019	Dissolved Oxygen	Temperature
Recorded Samples	498	498
Maximum	12.17 mg/L	24.7 °C
Minimum	-0.01 mg/L	4.26 °C
Average	5.00 mg/L	8.99 °C



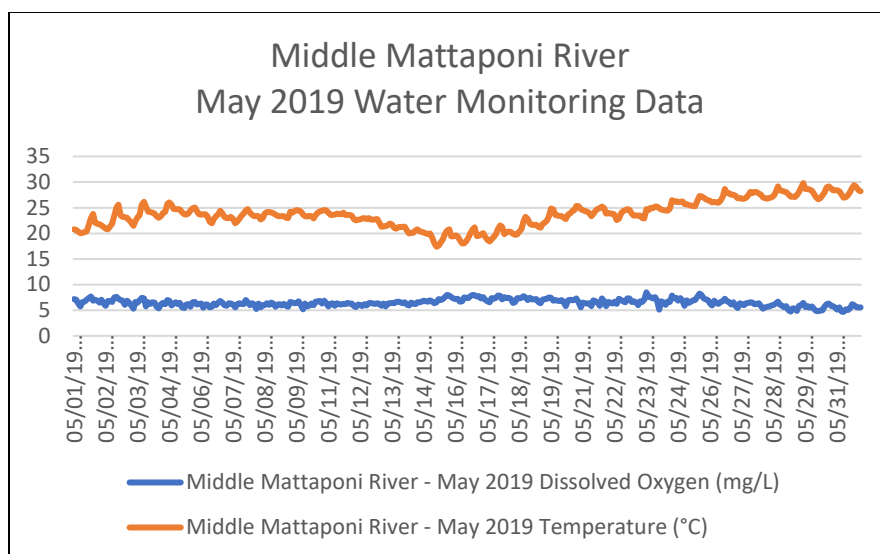
April 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 2.93 mg/L to 10.28 mg/L with an average of 7.84 mg/L. Water temperature ranged from 9.76 °C (49.57 °F) to 23.72 °C (74.70 °F) with an average of 17.99 °C (64.38 °F).

April 2019	Dissolved Oxygen	Temperature
Recorded Samples	360	360
Maximum	10.28 mg/L	23.62 °C
Minimum	2.93 mg/L	9.76 °C
Average	7.84 mg/L	17.99 °C



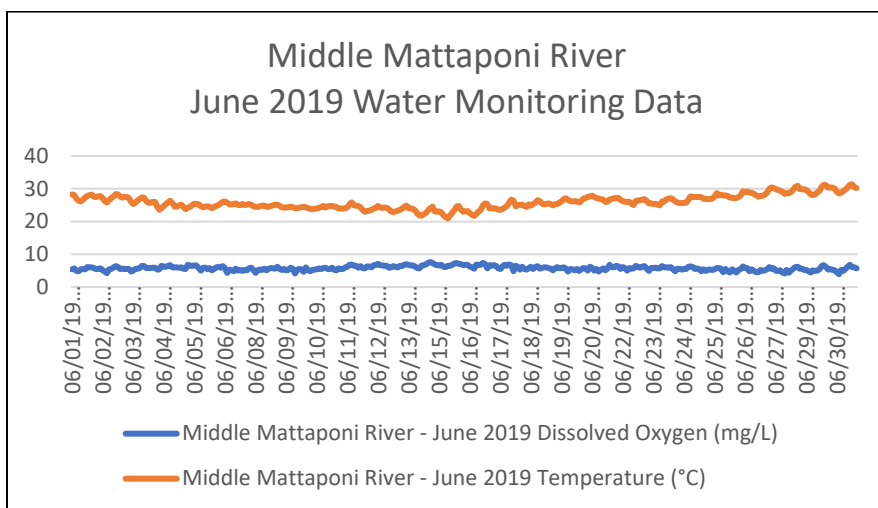
May 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 4.69 mg/L to 8.5 mg/L with an average of 6.48 mg/L. Water temperature ranged from 17.4 °C (63.32 °F) to 29.8 °C (85.64 °F) with an average of 23.81 °C (75.86 °F).

May 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	8.5 mg/L	29.8 °C
Minimum	4.69 mg/L	17.4 °C
Average	6.48 mg/L	23.81 °C



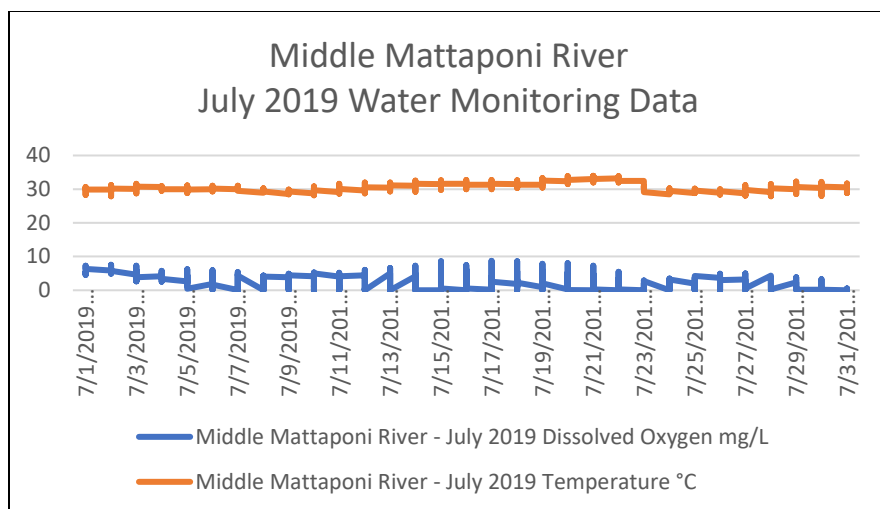
June 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 3.94 mg/L to 7.64 mg/L with an average of 5.78 mg/L. Water temperature ranged from 20.96 °C (69.73 °F) to 31.4 °C (88.52 °F) with an average of 25.94 °C (78.96 °F).

June 2019	Dissolved Oxygen	Temperature
Recorded Samples	360	360
Maximum	7.64 mg/L	31.4 °C
Minimum	3.94 mg/L	20.96 °C
Average	5.78 mg/L	25.94 °C



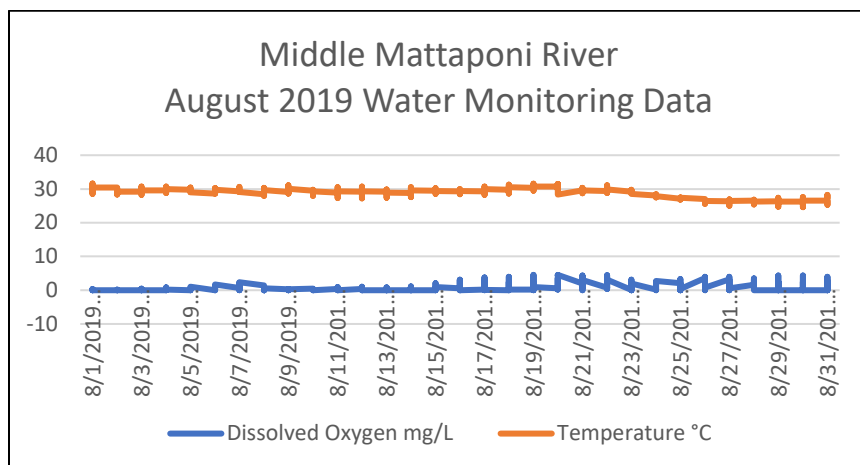
July 2019 monitoring data (371 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 0 mg/L to 8.73 mg/L with an average of 2.35 mg/L. Water temperature ranged from 27.88 °C (82.18 °F) to 33.96 °C (93.13 °F) with an average of 30.48 °C (86.86 °F).

July 2019	Dissolved Oxygen	Temperature
Recorded Samples	371	371
Maximum	8.73 mg/L	33.96 °C
Minimum	0 mg/L	27.88 °C
Average	2.35 mg/L	30.48 °C



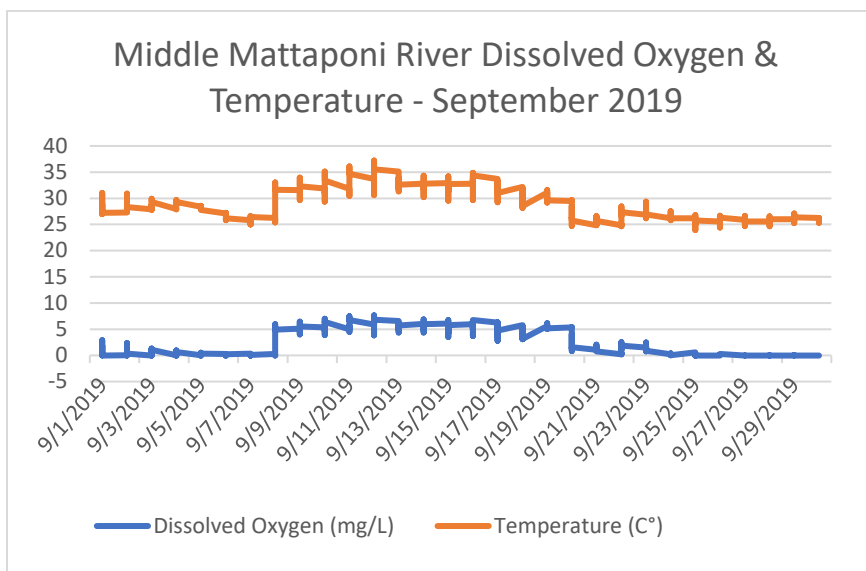
August 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.01 mg/L to 4.55 mg/L with an average of 0.86 mg/L. Water temperature ranged from 24.6 °C (76.28°F) to 31.62 °C (88.92°F) with an average of 28.78°C (83.8°F).

August 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	4.55 mg/L	31.62 °C
Minimum	-0.01 mg/L	24.6 °C
Average	0.86 mg/L	28.78 °C



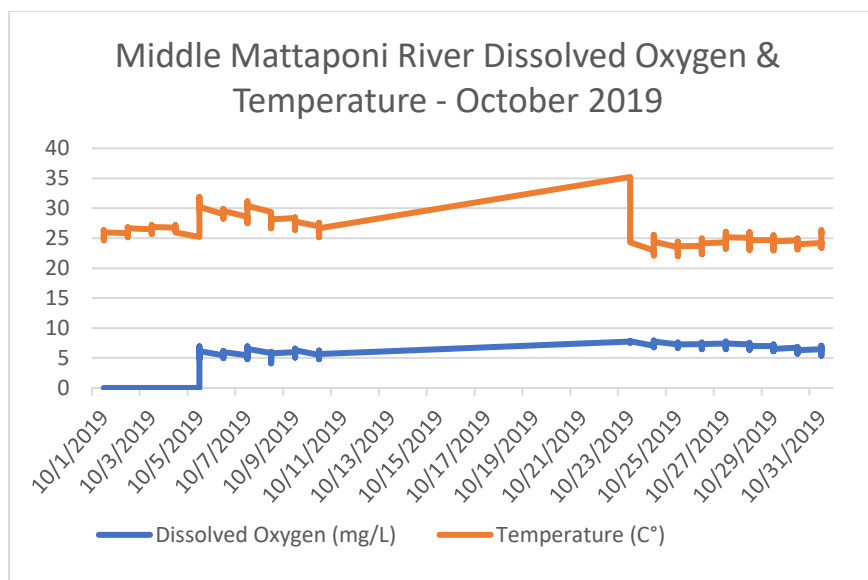
September 2019 monitoring data (361 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from -0.01 mg/L to 7.65 mg/L with an average of 2.39 mg/L. Water temperature ranged from 23.34°C (74.01°F) to 29.72°C (85.5°F) with an average of 26.44°C (79.59°F).

September 2019	Dissolved Oxygen	Temperature
Recorded Samples	361	361
Maximum	7.65 mg/L	29.72 °C
Minimum	-0.01	23.34 °C
Average	2.39 mg/L	26.44 °C



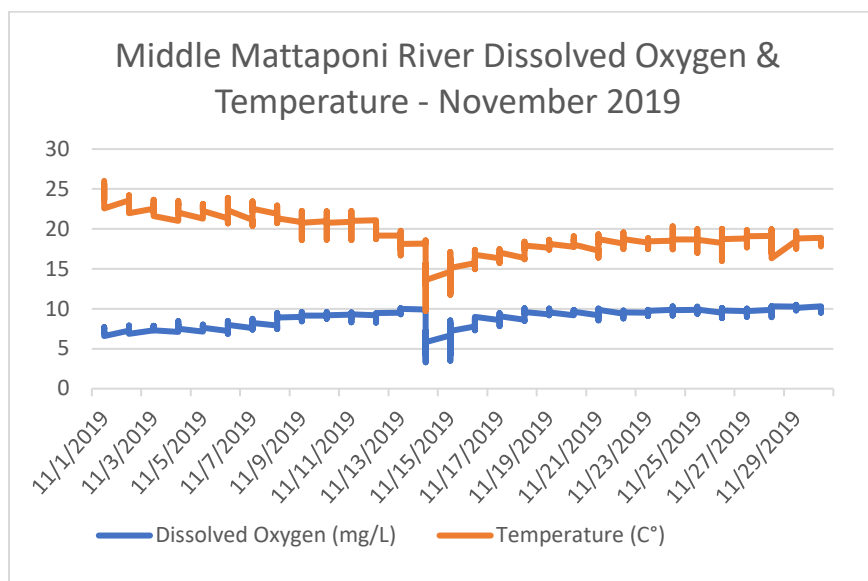
October 2019 monitoring data (217 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 0 mg/L to 7.92 mg/L with an average of 5.07 mg/L. Water temperature ranged from 15.32°C (59.58°F) to 27.46°C (81.43°F) with an average of 21.05°C (69.89°F).

October 2019	Dissolved Oxygen	Temperature
Recorded Samples	217	217
Maximum	7.92 mg/L	27.46 °C
Minimum	0 mg/L	15.32 °C
Average	5.07 mg/L	21.05 °C



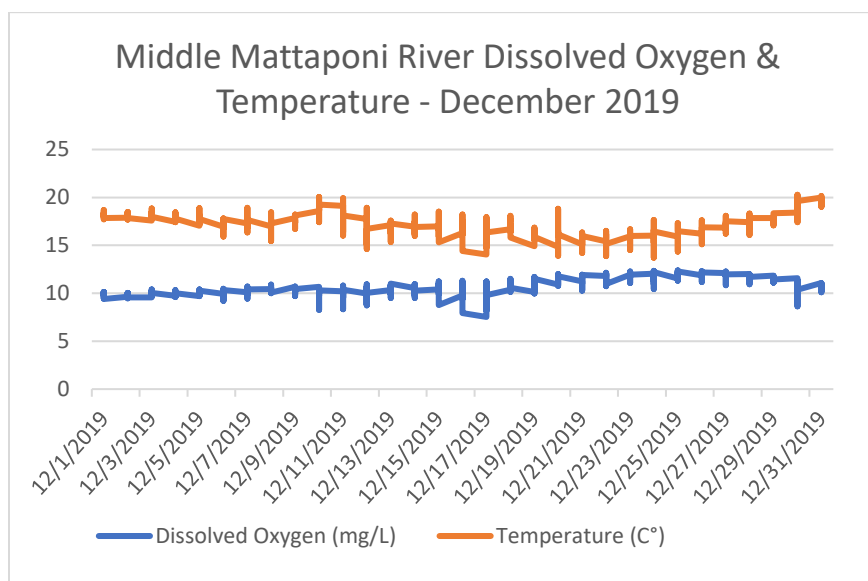
November 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 3.3 mg/L to 10.5 mg/L with an average of 8.84 mg/L. Water temperature ranged from 5.98°C (42.76°F) to 18.96°C (66.13°F) with an average of 10.59°C (51.06°F).

November 2019	Dissolved Oxygen	Temperature
Recorded Samples	360	360
Maximum	10.5 mg/L	18.96 °C
Minimum	3.3 mg/L	5.98 °C
Average	8.84 mg/L	10.59 °C



December 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 7.53 mg/L to 12.39 mg/L with an average of 10.74 mg/L. Water temperature ranged from 2.36°C (36.25°F) to 9.9°C (49.82°F) with an average of 6.49°C (43.68°F).

December 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	12.39 mg/L	9.9 °C
Minimum	7.53 mg/L	2.36 °C
Average	10.74 mg/L	6.49 °C

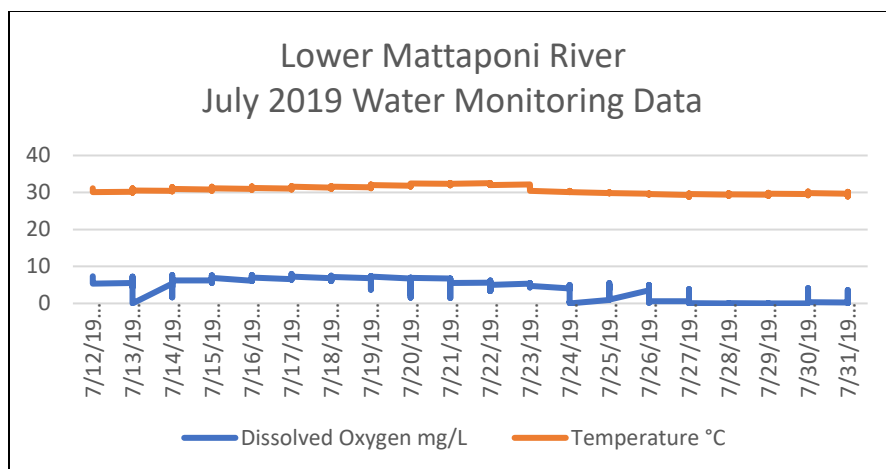


Lower Mattaponi

Reinitiated monitoring with replaced logger in July 2019.

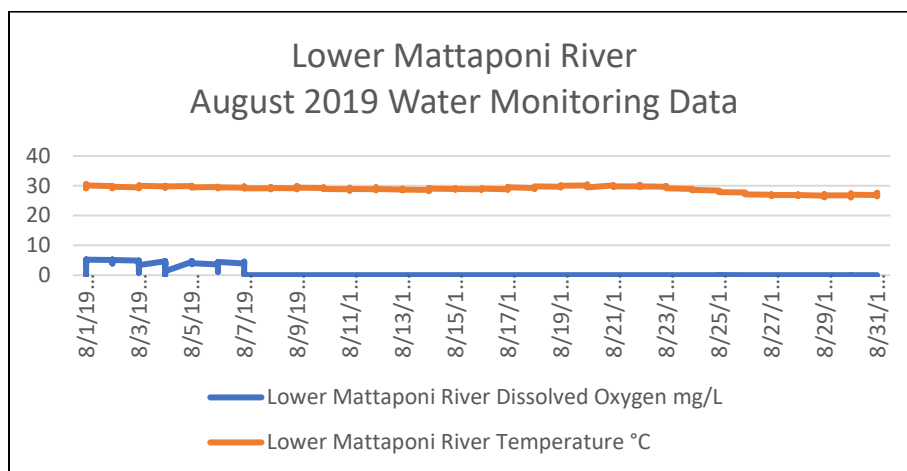
July 2019 monitoring data (233 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 0.00 mg/L to 7.98 mg/L with an average of 4.12 mg/L. Water temperature ranged from 28.8 °C (83.84 °F) to 32.58 °C (90.64°F) with an average of 30.66 °C (87.19 °F).

July 2019	Dissolved Oxygen	Temperature
Recorded Samples	233	233
Maximum	7.98 mg/L	32.58 °C
Minimum	0.0 mg/L	28.8 °C
Average	4.12 mg/L	30.66 °C



August 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 0.00 mg/L to 5.27 mg/L with an average of 0.79 mg/L. Water temperature ranged from 26.12 °C (79.02 °F) to 30.58 °C (87.04 °F) with an average of 28.55 °C (83.39 °F).

August 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	5.27 mg/L	30.58 °C
Minimum	0.00 mg/L	26.12 °C
Average	0.79 mg/L	28.85 °C

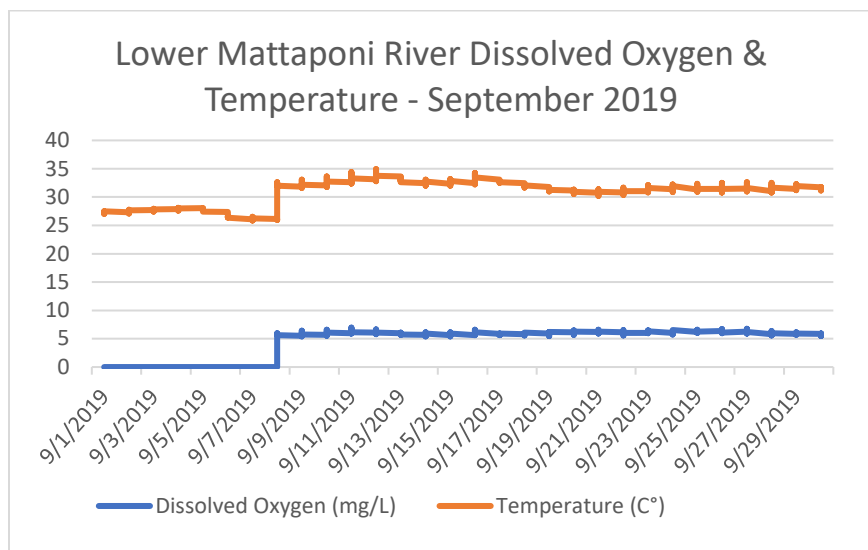


September 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 0 mg/L to 6.96 mg/L with an average of 4.48 mg/L. Water temperature ranged from 24.28°C (75.70°F) to 28.3°C (82.94°F) with an average of 26.29°C (79.32°F).

September 2019	Dissolved Oxygen	Temperature
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Recorded Samples	360	360
Maximum	6.96 mg/L	28.3 °C
Minimum	*0 mg/L	24.28 °C
Average	4.48 mg/L	26.29 °C

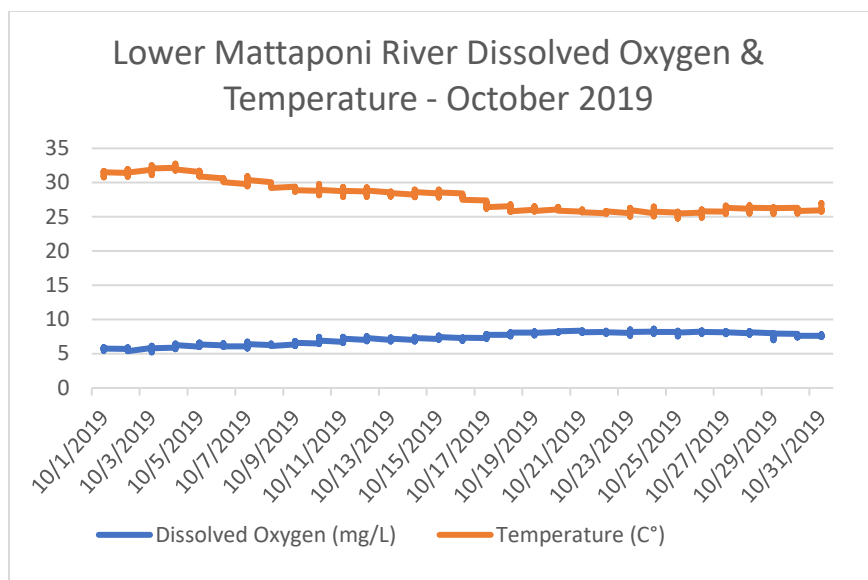
*Dissolved Oxygen sensor appears to be offline 9/1-9/7, 2019.



*Dissolved Oxygen sensor appears to be offline 9/1-9/7, 2019.

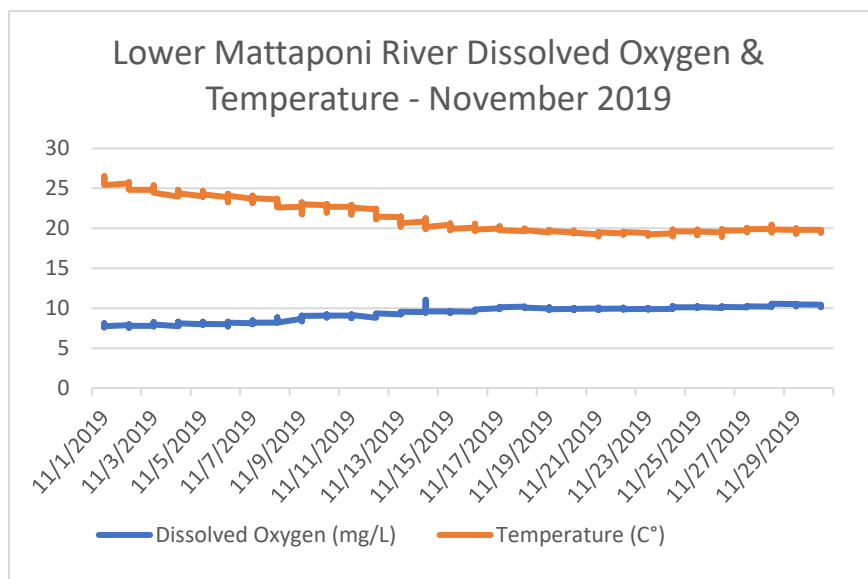
October 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 5.19 mg/L to 8.67 mg/L with an average of 7.22 mg/L. Water temperature ranged from 16.84°C (62.31°F) to 26.36°C (79.45°F) with an average of 20.70°C (69.26°F).

October 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	8.67 mg/L	26.36 °C
Minimum	5.19 mg/L	16.84 °C
Average	7.22 mg/L	20.70 °C



November 2019 monitoring data (360 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 7.54 mg/L to 11.06 mg/L with an average of 9.35 mg/L. Water temperature ranged from 8.78°C (47.80°F) to 18.86°C (65.95°F) with an average of 12.05°C (53.69°F).

November 2019	Dissolved Oxygen	Temperature
Recorded Samples	360	360
Maximum	11.06 mg/L	18.86 °C
Minimum	7.54 mg/L	8.78 °C
Average	9.35 mg/L	12.05 °C



December 2019 monitoring data (372 dissolved oxygen and temperature readings) logged dissolved oxygen levels ranging from 10.15 mg/L to 11.47 mg/L with an average of 10.85 mg/L. Water temperature ranged from 4.98°C (40.96°F) to 9.24°C (48.63°F) with an average of 7.32°C (45.18°F).

December 2019	Dissolved Oxygen	Temperature
Recorded Samples	372	372
Maximum	11.47 mg/L	9.24 °C
Minimum	10.15 mg/L	4.98 °C
Average	10.85 mg/L	7.32 °C

